

Appl. No. 09/707,167

Response dated October 19, 2004

Reply to Office Action of July 20, 2004

Claims 1-17 (previously deleted).

Claim 18 (currently amended): A method for the isolation of a recombinant polypeptide from a cell, said cell comprising oil bodies and the recombinant polypeptide, said method comprising:

- (1) contacting said oil bodies with a protein ligand molecule that associates with the oil bodies and said recombinant polypeptide to allow said recombinant polypeptide to associate with said oil bodies through the protein ligand molecule, by disrupting said cell's integrity wherein the protein ligand molecule and the recombinant polypeptide are not proteins that are normally associated with oil bodies; and
- (2) isolating said oil bodies associated with said recombinant polypeptide.

Claim 19 (previously deleted).

Claim 20 (previously amended): A method according to claim 18 wherein said ligand is an antibody, an antibody fragment or a single chain antibody that binds to an oil body protein.

Claim 21 (previously deleted).

Claim 22 (currently amended): A method for the isolation of a recombinant polypeptide from a cell, said cell comprising oil bodies and the recombinant polypeptide, said method comprising:

- a) introducing into said cell (i) a first nucleic acid sequence molecule encoding a recombinant polypeptide and (ii) a second nucleic acid sequence encoding a ligand capable of associating with said recombinant polypeptide and with said oil bodies, wherein the protein ligand molecule and the recombinant polypeptide are not proteins that are normally associated with oil bodies;
- b) growing said cell under conditions permitting the expression of said recombinant polypeptide and said ligand;

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c) contacting said oil bodies with said recombinant polypeptide to allow said recombinant polypeptide to associate with said oil bodies through said ligand by disrupting said cell's integrity; and

d) isolating said oil bodies associated with said recombinant polypeptide

Claim 23 (previously amended): A method according to claim 22 wherein said recombinant polypeptide is prepared as a fusion protein with said ligand.

Claim 24 (original): A method according to claim 23 wherein said ligand is an antibody, an antibody fragment or single chain antibody that binds to an oil body protein.

Claim 25 (delete)

Claim 26 (previously amended): A composition comprising oil bodies associated with a ligand molecule covalently attached to a target molecule, wherein said ligand molecule and said target molecule are not proteins that are normally associated with oil bodies.

Claim 27 (original): A composition according to claim 26 wherein the ligand molecule and the target molecule are proteins.

Claim 28 (previously amended): A composition according to claim 27 wherein the ligand molecule and target molecules are covalently attached as a recombinant fusion protein.

Claim 29 (previously amended): A method for the separation of a target molecule from a sample comprising:

(1) contacting oil bodies with a protein ligand molecule that associates with the oil bodies and the target molecule, and a sample containing the target molecule to allow the target molecule to associate with the oil bodies through the protein ligand molecule,

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wherein the protein ligand molecule and the target molecule are not proteins that are normally associated with oil bodies; and

(2) separating the oil bodies and ligand molecule associated with the target molecule from the sample.

Claim 30 (previously Inserted): A method according to claim 29 wherein the protein ligand molecule is an antibody or a fragment thereof.

Claim 31 (previously inserted): A method according to claim 30 wherein the antibody is a single chain antibody.

Claim 32 (previously Inserted): A method according to claim 29 wherein the sample is a cell.

Claim 33 (previously amended): A method according to claim 29 wherein the target molecule is a protein target molecule and the protein ligand molecule is prepared as a fusion protein with the protein target molecule.

Claim 34 (previously inserted): A method according to claim 32 wherein said target molecule associates with the oil bodies through the protein ligand molecule upon the substantial disruption of said cell's integrity.

Claim 35 (previously inserted): A method according to claim 29 wherein the target molecule is a protein.